## **WEST Search History**



DATE: Tuesday, March 13, 2007

Hide?	<u>Set</u> Name	Query	<u>Hit</u> <u>Count</u>
	DB=PC	GPB, USPT, USOC, EPAB, JPAB, DWPI; PLUR=NO; OP=OR	
□· .	L37	135 not 136	351
	L36	L35 and 130	32
	L35	L34 and 126	383
	L34	L33 and 16	3584
	L33	11 and 12 and 132 and 14 and 119 and 120	5301
	L32	virus or bacteria or fungi or parasite	441078
	L31	129 and L30	34
	L30	unmethylated	2939
	L29	L28 and 127	371
	L28	treat\$ or prevent\$ or ameliorat\$	7744059
	L27	123 and L26	373
	L26	\$acgt\$	8269
	L25	123 and L24	6
	L24	tgacgtt or acgtt	142
	L23	L22 and 16	3551
	L22	11 and 12 and 13 and 14 and 119 and 120	5136
	L21	11 and 12 and 13 and 14 and 119 and 120	5136
	L20	synthesis or synthesized	680673
	L19	phosphorothioate	20777
	L18	@ay>=1980<=1994	11130613
	L17	@py>1994	18146165
	L16	L15 and 16 and 19	4114
	L15	11 and 12 and 13 and 14 and 15	6260
	L11	cpg adj motif	537
	L10	(cg adj motif) or ((c adj g) adj5 motif)	68
	L9	carrier or pharmaceutical	1772082
	L8	oral or subcutaneous or intravenous or parenteral or transdermal	371417
	L7	sterol or cholesterol	86421
	L6	lipid or cationic adj lipid	121172
	L5	phosphorothioate or phosphoramidate or phosphotriester or	28924

	methylphosphonate	
L4	stabilized or stabilization or modified or modification	2764354
L3	cancer or tumor or tumour	305699
L2	anti adj sense	27620
L1	nucleic adj acid or nucleic adj acids or oligonucleotide or oligonucleotides	236260

END OF SEARCH HISTORY

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NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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=> S TGACGTT/SQSN AND SQL<=40 4785 TGACGTT/SQSN 7760700 SQL<=40

L1 4785 TGACGTT/SQSN AND SQL<=40

=> FILE CAPLUS USPATFULL

=>

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST 37.45 37.87

FILE 'CAPLUS' ENTERED AT 16:39:23 ON 13 MAR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

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=> S L1

L2 2070 L1

=> S L2 AND AY>1994

L3 1481 L2 AND AY>1994

=> s 12 and py<1994

L4 30 L2 AND PY<1994

=> dup rem 15

L5 IS NOT VALID HERE

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> dup rem 14

PROCESSING COMPLETED FOR L4

L5 30 DUP REM L4 (0 DUPLICATES REMOVED)

=> t 15 bib ab kwic 1-30

- L5 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 2001:741468 CAPLUS
- DN 135:299472
- TI Sandwich hybridization for detection of mRNAs using immobilized probe arrays
- IN Akitaya, Tatsuo; Mitsuhashi, Masato; Cooper, Allan
- PA Hitachi Chemical Research Center, Inc., USA; Hitachi Chemical Company, Ltd.
- SO U.S., 221 pp., Cont.-in-part of U.S. Ser. No. 857,059, abandoned. CODEN: USXXAM
- DT Patent
- LA English

FAN.CNT 3

	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
ΡI	US 6300058	B1 20011009	US 1992-974409	19921112
	WO 9315221	A1 19930805	WO 1993-US977	19930129 <
	W: CA, JP, KR,	US		
	RW: AT, BE, CH,	DE, DK, ES, FR, C	GB, GR, IE, IT, LU, MC,	NL, PT, SE
	JP 07506482	T 19950720	JP 1993-512765	19930129
PRAI	US 1992-827208	B2 19920129		
	US 1992-827975	B2 19920129		
	US 1992-857059	B2 19920324		
	US 1992-974409	A2 19921112		
	WO 1993-US977	W 19930129		

The present invention provides a method for detecting and quantifying mRNA AΒ in a sample. The mRNA that can be detected has a unique sequence. The method includes immobilizing a first polynucleotide to an insol. support. The first polynucleotide has a first sequence that hybridizes to the unique sequence on the mRNA. After immobilization of the first polynucleotide, the sample is applied to the insol. support under conditions that allow the unique sequence on the mRNA to hybridize with the first polynucleotide. Thereafter, a second polynucleotide is applied to the insol. support. This second polynucleotide has a second sequence thereon that hybridizes to a portion of the mRNA other than the unique sequence. The application of the second polynucleotide is performed under conditions that allow the second polynucleotide to hybridize with mRNA immobilized on said support, if present. Finally, the amount of the second polynucleotide immobilized on the support is measured to provide an indication of the amount of mRNA present in the sample. Polynucleotide

immobilized supports and sequences useful in the method are also provided. Use of the method to quantify a number of defined sequences in human cell culture lines is demonstrated. Criteria for the design of probes are also discussed.

RE.CNT 81 THERE ARE 81 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

	$\mathtt{ALL}$	CITATIONS AV	AILABLE IN THE		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 6300058	B1		US 1992-974409	19921112
	WO 9315221	A1		WO 1993-US977	
		P, KR, US			
			C ES ER GR	GR, IE, IT, LU,	MC NI. PT SE
	JP 07506482	T T	19950720	JP 1993-512765	19930129
IT	115026 10 6	DNA (mouse si	19930720	iumP protein aDN	(A) 119331-28-1,
T T	113920-10-0,	DNA (mouse Cl	tone 465 gene	June procein com	A) 119331-20-1,
	DNA (mouse CI	oue bento der	ie c-jun RNA i	ormation factor	AP I CDNA)
	124228-98-4,	DNA (mouse ge	ene jund kna i	ormation factor	CDNA)
	127830-52-8,	DNA (human p	lacenta gene j	unB) 138389-96	-5, DNA (human
				cDNA) 150793-	
	150793-79-6	150793-82-1	150793-87-6		
	150793-90-1	150793-91-2	150794-35-7	150794-46-0	
	150794-49-3	150794-51-7 150794-96-0	150794-53-9		
	150794-95-9	150794-96-0	150794-97-1	150794-99-3	150795-00-9
	150795-01-0	150795-02-1	150795-09-8	150795-10-1	150795-11-2
	150795-12-3	150795-13-4	150795-14-5	150795-15-6	150795-26-9
	150795-93-0	150795-96-3	150796-17-1	182085-19-4	197873-87-3
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	197873-93-1	197873-94-2			197873-97-5
	197873-98-6	197873-99-7			197874-02-5
	197874-04-7	197874-05-8			197874-08-1
	197874-09-2	197874-10-5			197874-13-8
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	197874-54-7	197874-65-0			197874-68-3
	197874-69-4	197874-70-7			197874-73-0
	197874-74-1	197874-75-2	197874-76-3		197874-78-5
	197874-79-6	197874-80-9	197874-81-0	197874-82-1	197874-83-2
	197874-84-3	197874-85-4	197874-86-5	197874-87-6	197874-88-7
	197874-89-8	197874-90-1	197874-91-2	197874-92-3	197874-93-4
	197874-94-5	197874-95-6		197874-97-8	197874-98-9
	197874-99-0	197875-00-6	197875-01-7	197875-02-8	197875-03-9
	197875-04-0	197875-05-1	197875-06-2	197875-07-3	197875-08-4
	197875-09-5	197875-10-8	197875-11-9	197875-12-0	
	197875-13-1	197875-14-2	197875-15-3	197875-16-4	197875-17-5
	197875-18-6	197875-19-7	197875-21-1		197875-23-3
	197875-24-4	197875-25-5	197875-26-6		197875-28-8
	197875-29-9	197875-30-2	197875-31-3		197875-34-6
	197875-36-8	197875-37-9	197875-38-0		197875-40-4
	197875-41-5	197875-42-6	197875-43-7		197875-45-9
	197875-46-0	197875-47-1		197875-50-6	13/0/3 43 3
	197875-46-0	197875-53-9	197875-54-0		197875-56-2
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	197875-63-1	197875-68-6	197875-69-7		197875-71-1
	197875-72-2	197875-73-3	197875-75-5		197875-77-7
	197875-78-8	197875-79-9	197875-80-2		197875-97-1
	197875-98-2	197875-99-3	197876-00-9		197876-02-1
	197876-04-3	197876-05-4	197876-06-5	197876-07-6	197876-09-8
	197876-10-1	197876-11-2	197876-12-3	197876-13-4	197876-14-5
	197876-15-6	197876-16-7	197876-18-9	197876-19-0	197876-20-3
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197876-26-9 198002-19-6 198002-20-9 198002-21-0

RL: PRP (Properties)

(unclaimed sequence; sandwich hybridization for detection of mRNAs using immobilized probe arrays)

- L5 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1996:717007 CAPLUS
- DN 126:2519
- TI An enhancer element from the octopine synthase (OCS) gene of T-DNA that functions in monocots and dicots
- PA Mycogen Plant Science, Inc., USA
- SO U.S., 43 pp., Cont.-in-part of U.S. Ser. No. 11,614, abandoned. CODEN: USXXAM
- DT Patent
- LA English
- FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 5573932	Α	19961112	US 1990-525897	19900518
	ZA 8800319	Α	19880928	ZA 1988-319	19880118 <
	ES 2074435	Т3	19950916	ES 1988-300853	19880202
	JP 63276492	Α	19881114	JP 1988-26413	19880205 <
	CA 1309365	С	19921027	CA 1988-558282	19880205 <
	US 5290924	A	19940301	US 1993-51006	19930421
	US 5710267	A	19980120	US 1995-460378	19950602
	US 5837849	Α	19981117	US 1995-459178	19950602
PRAI	US 1987-11614	B2	19870206		
	US 1987-11904	B2	19870206		
	US 1987-63338	A2	19870615		
	US 1990-525866	B1	19900518		
	US 1990-525897	A1	19900518		

AB A DNA sequence common to the octopine synthase gene and six other genes of T-DNA has been identified as an enhancer element that functions in monocotyledonous and dicotyledonous plants. The element has one or two sequence domains and binds the ocs transcription factor. The element is conserved in tobacco and maize and is also found in the cauliflower mosaic virus 35S promoter. The element was identified by its effect on the level of expression from the maize adhl promoter. After narrowing the function down to a 16 base-pair palindromic sequence, the role of the sequence was confirmed using a synthetic sequence. The stimulatory effect was somewhat insensitive to distance from the promoter. The element plays in a role in wound induction of gene expression.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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ΡI	US 5573932	A	19961112	US 1990-525897	19900518
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	JP 63276492	A	19881114	JP 1988-26413	19880205 <
	CA 1309365	C	19921027	CA 1988-558282	19880205 <
	US 5290924	Α	19940301	US 1993-51006	19930421
	US 5710267	Α	19980120	US 1995-460378	19950602
	US 5837849	Α	19981117	US 1995-459178	19950602
IT	183972-86-3				

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(nucleotide sequence, ocs enhancer element of carnation etched ring virus 35S promoter; enhancer element from octopine synthase (OCS) gene of T-DNA that functions in monocots and dicots)

L5 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN AN 1993:619168 CAPLUS

```
DN
      119:219168
      Immobilized and labeled mRNA-complementary probes for rapidly detecting
 TI
      and quantifying mRNA
      Akitaya, Tatsuo; Cooper, Allan; Mitsuhashi, Masato
 IN
      Hitachi Chemical Co., Ltd., Japan; Hitachi Chemical Research Center, Inc.
 PA
      PCT Int. Appl., 177 pp.
 SO
      CODEN: PIXXD2
 DT
      Patent
      English
 LΑ
 FAN.CNT 3
                                        APPLICATION NO.
                       KIND DATE
      PATENT NO.
                                                              DATE
      PATENT NO.
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                        A1 19930805 WO 1993-US977
      WO 9315221
                                                               19930129 <--
 PΙ
         W: CA, JP, KR, US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
                       B1 20011009 US 1992-974409 19921112
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      JP 07506482
                        A2
 PRAI US 1992-827208
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      US 1992-857059
                        A2
                              19920324
      US 1992-974409
                        A2
                              19921112
      US 1992-827975
                        B2 19920129
                        W
      WO 1993-US977
                              19930129
      A highly sensitive, quant. and rapid method for detecting and quantifying
 AB
      mRNA in a sample without the need to purify mRNA from cells is described.
      A polynucleotide sequence unique to the target mRNA is identified. A
      computer program for identification of this probe is demonstrated. The
      probe so identified is immobilized on an insol. support and the sample is
      incubated with this preparation under hybridization conditions. The
      nonhybridized components of the sample are washed away and the amount of
      mRNA immobilized is determined  The mRNA may be determined using a labeled 2nd
 probe
      or with a nucleic acid stain such as ethidium bromide, yoyo-1, or toto-1.
      The application of this method to quantification of mRNA for human \beta 2
      adrenergic receptor and for various G proteins and jun oncogenes was
      demonstrated.
      WO 9315221 A1 19930805
 PΙ
      PATENT NO. KIND DATE APPLICATION NO.
                                                              DATE
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      WO 9315221
                        A1 19930805 WO 1993-US977
                                                               19930129 <--
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         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
      US 6300058
                      B1 20011009 US 1992-974409 19921112
      JP 07506482
                         Т
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                                                               19930129
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 IT
      197875-62-0 197875-68-6 197876-09-8 197876-15-6
      RL: USES (Uses)
         (PCR primer for Go protein cDNA of rat)
 IT
      197875-11-9
      RL: USES (Uses)
         (PCR primer for amplification of Go protein cDNA of rat)
 L5
      ANSWER 4 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
 AΝ
      1994:155890 CAPLUS
 DN
      120:155890
      Detection of cytomegalovirus (CMV) by PCR
 ΤI
      Hirai, Kanji; Hironaka, Takashi; Yamaguchi, Masaki; Kita, Hiroshi
 TN
 PΑ
      Iatron Lab, Japan; Takara Shuzo Co
      Jpn. Kokai Tokkyo Koho, 13 pp.
 SO
      CODEN: JKXXAF
 DT
      Patent
      Japanese
· LA
 FAN.CNT 1
                       KIND
                               DATE
                                         APPLICATION NO.
                                                               DATE
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Α
                              19931203
                                          JP 1990-415807
                                                                19901228 <--
PΙ
    JP 05317099
                              20000202
                                         JP 1999-211291
                                                                19901228
    JP 2000032992
                       Α
                       A3
                              19901228
PRAI JP 1990-415807
    A method using a series of oligonucleotide primers and probes to detect
    cytomegalovirus (CMV) by PCR is disclosed. The method is useful in
    diagnosis of diseases associated with CMV.
    JP 05317099 A 19931203 Heisei
PT
                                         APPLICATION NO.
                                                               DATE
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                       KIND
                             DATE
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                                         _____
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                              19931203 JP 1990-415807 19901228 <-- 20000202 JP 1999-211291 19901228
    JP 05317099
                        Α
ΡI
                                         JP 1999-211291
    JP 2000032992
                        Α
    145718-35-0 145718-36-1 145718-37-2 145718-38-3 147307-21-9 147307-22-0
IT
    RL: USES (Uses)
        (primer, nucleotide sequence of, for detection of cytomegalovirus by
    ANSWER 5 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
    1994:2262 CAPLUS
AN
    120:2262
DN
    Cloning of 16S rRNA gene of Actinobacillus pleuropneumoniae and the use of
TT
    gene to diagnosis of A. pleuropneumoniae
    Nunofuji, Satoshi; Mise, Shizuo; Seto, Yasuhiro; Taneda, Takayuki; Sakano,
IN
    Nippon Flour Mills, Japan; Nat Federation Agric Coop Ass
PΆ
    Jpn. Kokai Tokkyo Koho, 17 pp.
SO
    CODEN: JKXXAF
DT
    Patent
LA
    Japanese
FAN.CNT 1
                                        APPLICATION NO.
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    JP 05219955
                       Α
                                         JP 1992-26868
                                                               19920213 <--
PΙ
                              19930831
PRAI JP 1992-26868
                              19920213
    The 16S rRNA gene of Actinobacillus pleuropneumoniae is cloned and
AB
     sequenced, and DNA probes designed from the gene for diagnosis of the
    bacteria which is associated with pig pleuropneumonia. Fragments of the 16S
    rRNA gene were obtained from the DNA of A. pleuropneumoniae serotype 1, 2,
     and 5 by PCR using DNA primers derived from the consensus region of known
    bacterial 16S rRNA gene. The 16S rRNA gene fragments were used to clone
     the full length 16S rRNA genes (3) from a genomic libraries of A.
    pleuropneumoniae constructed on \lambda DASH11.
    JP 05219955 A 19930831 Heisei
PΙ
                      KIND DATE
                                         APPLICATION NO.
    PATENT NO.
                                                               DATE
                              19930831 JP 1992-26868
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    JP 05219955
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PΙ
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IT
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     151443-13-9
     151443-18-4
                151443-19-5
     RL: PRP (Properties); BIOL (Biological study)
        (nucleotide sequence of, derived from 16S rRNA gene of Actinobacillus
       pleuropneumoniae, for diagnosis of A. pleuropneumoniae)
```

- L5 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1994:2236 CAPLUS
- DN 120:2236
- TI Cloning of 16S rRNA gene of Pasteurella maltocida and the use of gene to diagnosis of P. maltocida
- IN Mise, Shizuo; Nunofuji, Satoshi; Seto, Yasuhiro; Taneda, Takayuki; Sakano, Tetsuya

PA Nippon Flour Mills, Japan; Nat Federation Agric Coop Ass

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 05219954	Α	19930831	JP 1992-26867	19920213 <
PRAI	JP 1992-26867		19920213		

AB The 16S rRNA gene of Pasteurella maltocida is cloned and sequenced, and DNA probes are designed from the gene for diagnosis of the bacteria which is associated with respiratory diseases of livestock. A fragment of the 16S rRNA gene was obtained from the DNA of P. maltocida Kobe6 strain by PCR using DNA primers derived from the consensus region of known bacterial 16S rRNA gene. The 16S rRNA gene fragment was used to clone the full length 16S rRNA gene from a genomic library of P. maltocida Kobe6 constructed on λDASH11.

ΡI	JP 05219954	A 19930831	Heisei		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 05219954	A	19930831	JP 1992-26867	19920213 <
IT	151442-96-5	151442-97-6	151442-99-	8 151443-00-4	151618-03-0
	151618-04-1	151618-05-2	151618-06-	3 151618-07-4	151618-08-5
	151618-09-6	151618-10-9	151618-11-	0 151618-12-1	151618-13-2
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	151618-18-7	151618-19-8	151618-20-	1 151618-21-2	151618-22-3
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	151618-28-9	151618-29-0	151618-30-	3 151618-31-4	151618-32-5
	151618-33-6	151618-34-7	151618-35-	8 151618-36-9	
	RL: PRP (Pro	operties); BIO	L (Biological	study)	
	(nucleot:	ide sequence o	f, derived fr	om 16S rRNA gene	of, for diagnosis
	of Paste	urella maltoci	da)		

- L5 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1993:249149 CAPLUS
- DN 118:249149
- TI Multiple protein-binding domains and functional cis-elements in the 5'-flanking region of the human pyruvate dehydrogenase  $\alpha$ -subunit gene
- AU Chang, Mei; Naik, Sharon; Johanning, Gary L.; Ho, Lap; Patel, Mulchand S.
- CS Sch. Med., Case West. Reserve Univ., Cleveland, OH, 44106, USA
- SO Biochemistry (1993), 32(16), 4263-9 CODEN: BICHAW; ISSN: 0006-2960
- DT Journal
- LA English
- The 5'-flanking region of the  $\alpha$ -subunit gene of the human pyruvate AB dehydrogenase (E1) was characterized. DNase I footprinting with rat liver nuclear exts. identified 7 major protein-binding domains termed P1 through P7 in a 796 base pair DNA fragment (base pairs -763 to +33). P1 through P4 are clustered in the -221/+33 region. These protein-binding domains contain several known consensus sequences such as a TATA box, CAAT box, Sp1, and CRE, which all have previously been implicated in the constitutive transcription of several genes. Oligonucleotide competition studies indicate that oligonucleotides specific for CTF/NF-1 and Sp1 displaced the nuclear proteins bound to the CAAT box (within P3) and an Sp1 site (within P4), resp. Several other well-characterized and purified transactivators (c-Fos, c-Jun, C/EBP, AP-2, and Sp1) have been shown to bind to the -221/+33 region. Other elements located upstream of the -221/+33 region, which includes nuclease protection domains P5-P7, are required for enhanced promoter activity of the 796 bp sequence. Promoter activity was measured by transient expression of a chloramphenicol acetyltransferase gene ligated to deletion fragments of the 5'-flanking region. Crucial element(s) for promoter activity and complex DNA-nuclear

protein interactions were confined within a region spanning -221/+33. This region also retained more than 75% of the promoter activity of the 796 bp sequence. Addnl., this promoter region shows characteristics of both facultative and housekeeping gene promoters, suggesting complex transcription regulation.

SO Biochemistry (1993), 32(16), 4263-9

CODEN: BICHAW; ISSN: 0006-2960

IT 147758-87-0

RL: BIOL (Biological study)

(cAMP responsive element, of pyruvate dehydrogenase  $\alpha$ -subunit gene of human, sequence of)

- L5 ANSWER 8 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1993:642161 CAPLUS
- DN 119:242161
- TI Nested polymerase chain reaction for detection of Mycobacterium tuberculosis in clinical samples
- AU Miyazaki, Yoshitsugu; Koga, Hironobu; Kohno, Shigeru; Kaku, Mitsuo
- CS Sch. Med., Nagasaki Univ., Nagasaki, 852, Japan
- SO Journal of Clinical Microbiology (1993), 31(8), 2228-32. CODEN: JCMIDW; ISSN: 0095-1137
- DT Journal
- LA English
- AB The nested polymerase chain reaction technique was compared with the conventional smear and culture methods for detection of Mycobacterium tuberculosis. The nested polymerase chain reaction used in this study showed excellent specificity, sensitivity, and agreement with the conventional methods for 417 clin. samples, indicating a contribution to the rapid diagnosis of mycobacterial infectious diseases.
- SO Journal of Clinical Microbiology (1993), 31(8), 2228-32 CODEN: JCMIDW; ISSN: 0095-1137
- IT 151219-33-9 151219-34-0
  - RL: USES (Uses)

(nested PCR primer, Mycobacterium tuberculosis detection in clin. samples using)

- L5 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1993:421509 CAPLUS
- DN 119:21509
- TI Detection of 12 germ-line mutations in the adenomatous polyposis coli gene by polymerase chain reaction
- AU Ando, Hiroshi; Miyoshi, Yasuo; Nagase, Hiroki; Baba, Shozo; Nakamura, Yusuke
- CS Dep. Biochem., Cancer Inst., Tokyo, Japan
- SO Gastroenterology (1993), 104(4), 989-93 CODEN: GASTAB; ISSN: 0016-5085
- DT Journal
- LA English
- The adenomatous polyposis coli (APC) gene at chromosome 5q21 that is AB responsible for familial adenomatous polyposis (FAP) was recently isolated, and germ-line mutations in a substantial number of FAP families were characterized. Based on this information, the authors attempted to develop a presymptomatic diagnosis test for members of families that carry FAP. A rapid screening procedure using a polymerase chain reaction (PCR) method without radioisotopes, if necessary, coupled with digestion of restriction enzymes has been performed by detection of germ-line mutations that alter the size of DNA fragments or affect the recognition site of restriction enzymes in the APC locus. A rapid screening procedure to detect germ-line mutations at 12 loci that cause adenomatous polyposis was established. Using these 12 systems, presymptomatic diagnoses can be made with 100% accuracy within 24 h. The procedures will be useful for counseling of members in some FAP families, which accounted for nearly 40% of the 95 FAP kindreds that have been detected by the germ-line mutations so far.

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Gastroenterology (1993), 104(4), 989-93
SO
     CODEN: GASTAB; ISSN: 0016-5085
IT
     148267-28-1
                   148267-29-2
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                                                148267-31-6
                                                              148267-32-7
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     148267-33-8
                   148267-34-9
                                 148267-35-0
                                                148267-41-8 148267-42-9
                                 148267-40-7
     148267-38-3
                   148267-39-4
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                                                148267-46-3
                                                              148267-47-4
     148267-43-0
                   148267-44-1
     148267-48-5
                   148267-49-6
     RL: USES (Uses)
        (PCR primer, for adenomatous polyposis coli gene mutation detection, in
        human with familial adenomatous polyposis)
     ANSWER 10 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1993:596771 CAPLUS
AN
DN
     119:196771
     Type differentiation of herpes simplex virus by stringent hybridization of
TI
     polymerase chain reaction products
     Inouye, S.; Hondo, R.
     Dep. Microbiol., Inst. Public Health, Tokyo, Japan
CS
     Archives of Virology (1993), 129(1-4), 311-16
CODEN: ARVIDF; ISSN: 0304-8608
DT
     Journal
     English
LΑ
    A simple procedure for type differentiation of herpes simplex virus with
     the use of polymerase chain reaction (PCR)-amplified DNAs, was
     established: 1. The target sequence region for PCR was chosen from the
     coding sequences for an envelope protein, with the terminal sequences for
     PCR primers to be common among different types, but with the internal
     sequences to be variable. 2. Biotin-labeled probes for each type were
     prepared by PCR with the above primers and the templates from standard viruses
     of different types. 3. With templates from isolated strains or clin.
     specimens, the target DNA segment was amplified, and then immobilized on
     microplate wells. 4. Hybridization was carried out with the biotin-probes
     under a stringent condition so that the immobilized DNA was hybridized
     only with the homologous-type probe. 5. This hybridization result was
     visualized by using streptavidin-conjugated peroxidase and coloring
     reagents. This procedure may be applicable to differentiation of types or
     strains belonging to a group of closely related viruses.
     Archives of Virology (1993), 129(1-4), 311-16
CODEN: ARVIDF; ISSN: 0304-8608
SO
                   150742-49-7
IT
     150742-48-6
     RL: USES (Uses)
        (PCR primer, for herpes simplex virus strain differentiation)
     ANSWER 11 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1993:426464 CAPLUS
ΑN
DN
     119:26464
     Functional analysis of rev-responsive element of the human
TΤ
     immunodeficiency virus type 1
     Lee, Hyeong Yeol; Lee, Ann Hwee; Kang, Shin Sung; Sung, Young Chul
ΑU
     Dep. Life Sci., Pohang Inst. Sci. Technol., Pohang, S. Korea
CS
     Han'quk Saenghwa Hakhoechi (1992), 25(3), 236-43
SO
     CODEN: KBCJAK; ISSN: 0368-4881
DT
     Journal
LA
     Expression of the structural proteins of human immunodeficiency virus type
AB
     (HIV-1) requires the Rev protein encoded by the rev open reading frame.
     Rev protein interacts with Rev-responsive element RRE located in the env
     region of the viral mRNA and seems to mediate the export of the
     incompletely spliced viral mRNA to the cytoplasm. RRE has a complex
     secondary structure which is composed of a central stem (I'), a small stem
     (I) and 5 stem/loops (II, III, IV, V, VI). To investigate which region of
     RRE is essential for the interaction with Rev protein, mutational anal. in
     RRE was carried out. The authors examined the nature of the mutated RRE in
     several assay systems, p24 ELISA assay, reverse transcriptase assay, and
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chloramphenicol acetyltransferase assay. Here, the secondary structure of stem/loop II region is critical for the Rev response. Other structural components within RRE RNA seem to have only subsidiary roles. Also, RRE appears to contain a neg. sequence which hinders the expression of structural gene in the absence of the Rev protein. Han'quk Saenghwa Hakhoechi (1992), 25(3), 236-43 CODEN: KBCJAK; ISSN: 0368-4881 147259-47-0 147259-48-1 147259-49-2 147259-50-5 147259-46-9 147302-51-0 147302-52-1 147302-49-6 147302-50-9 147302-53-2 147302-56-5 147302-57-6 147302-58-7 147302-54-3 147302-55-4 147302-59-8 147302-60-1 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (rev protein regulation by, as human immunodeficiency virus response element analog, structure in) ANSWER 12 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN 1993:74425 CAPLUS 118:74425 Increased sensitivity for detection of human cytomegalovirus in urine by removal of inhibitors for the polymerase chain reaction Yamaguchi, Yuki; Hironaka, Takashi; Kajiwara, Michiko; Tateno, Emiko; Kita, Hiroshi; Hirai, Kanji Dep. Cell Regul., Med. Res. Inst., Tokyo, Japan Journal of Virological Methods (1992), 37(2), 209-18 CODEN: JVMEDH; ISSN: 0166-0934 Journal English The presence of inhibitors in urine interferes with the enzymic reaction of the polymerase chain reaction (PCR) for detection of human cytomegalovirus (HCMV). To remove inhibitors, HCMV virions in urine were precipitated with polyethylene glycol, or DNA was extracted from urine by the use of glass powder and subjected to PCR followed by Southern blot hybridization with alkaline phosphatase-linked oligonucleotide probes. These simple, rapid methods increased significantly the sensitivity of PCR for detection of HCMV in urine. Journal of Virological Methods (1992), 37(2), 209-18 CODEN: JVMEDH; ISSN: 0166-0934 145718-38-3 145718-36-1 145718-37-2 145718-35-0 RL: USES (Uses) (polymerase chain reaction primer, for human cytomegalovirus detection in urine) ANSWER 13 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN 1992:1774 CAPLUS 116:1774 Detection of transcripts of human papilloma virus in biological samples Hendricks, David A.; Lane, David J.; Rigby, Susan; Parodos, Kyriaki Gene-Trak Systems, USA PCT Int. Appl., 55 pp. CODEN: PIXXD2 Patent English FAN.CNT 1 PATENT NO. KIND DATE . APPLICATION NO. DATE \_\_\_\_\_\_ - - **- -**\_\_\_\_\_ 19910613 WO 1990-US7057 19901203 <--A1 WO 9108312 W: AU, CA, JP RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE AU 1991-69669 19910626 19901203 <--Α AU 9169669 EP 1991-901374 19901203 <--EP 502994 **A1** 19920916 19950906 EP 502994

B1

R: DE, FR, GB, IT

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T 19930402 JP 1991-501759
A2 19950712 EP 1995-200344
B1 20011107
     JP 05501650
                                                                    19901203 <--
     EP 662518
                                                                    19901203
     EP 662518
        R: DE, FR, GB, IT
US 5580970 A
PRAI US 1989-444526 A
EP 1991-901374 A3
                              19961203
                                            US 1994-207226
                                                            19940304
                                19891201
                                19901203
     WO 1990-US7057
                         Α
                                19901203
     US 1990-622742 B1
                               19901205
     Methods for the diagnosis and prognosis of infection by human papilloma
AB
     virus are described. The method uses probes to identify transcription
     from genes E6 and E7 associated with neoplastic transformation by capture
     hybridization. Probes are described that are specific for a number of
     isolates with high oncogenic potential. The design of probes for
     detection of splices site regions of the mature E6 and E7 transcripts and
     their use, and the use of capture probes immobilized on magnetic particles
     are described. The system detected 500 fg of target nucleic acid in a
     sample. Response of the assay was linear in the range 100 fg to 500 pg.
PΙ
     WO 9108312 A1 19910613
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
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     WO 9108312
PΙ
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         W: AU, CA, JP
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
                         A 19910626 AU 1991-69669
A1 19920916 EP 1991-901374
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     AU 9169669
                                            EP 1991-901374
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                         B1
                                19950906
     EP 502994
        R: DE, FR, GB, IT
     F: DE, FR, GB, IT

JP 05501650 T 19930402 JP 1991-501759

EP 662518 A2 19950712 EP 1995-200344

EP 662518 B1 20011107
                                                                    19901203 <--
                                                                    19901203
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     US 5580970 A 19961203 US 1994-207226 19940
136361-39-2 136361-43-8 136361-45-0 136361-46-1 136361-47-2
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                                 136361-82-5 137748-44-8
     RL: BIOL (Biological study)
        (oligonucleotide probe for processed transcript of human papilloma gene
        E6 or E7)
     ANSWER 14 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1992:77829 CAPLUS
AN
DN
     116:77829.
     Amplification of nucleic acid sequences
TI
     Copley, Clive Graham; Anwar, Rashida; Mcpheat, William Leishman; Markham,
IN
     Alexander Fred; Smith, John Craig
     Imperial Chemical Industries PLC, UK
PΑ
     Eur. Pat. Appl., 45 pp.
so
     CODEN: EPXXDW
DT
     Patent
     English
LΑ
FAN.CNT 1
     PATENT NO. KIND
                                DATE
                                            APPLICATION NO. DATE
                                ______
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     EP 439330 A2 19910731
EP 439330 A3 19920219
                                19910731 EP 1991-300479
                                                                     19910122 <--
PΙ
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
     AU 9169384 A 19910801 AU 1991-69384 19910116 <-- AU 652548 B2 19940901
                                19940901
                          B2
     AU 652548
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GB 224033	9 A	19910731	GB 1991-1373	19910122 <
GB 224033	9 B	19940216		
CA 203488	3 A1	19910726	CA 1991-2034883	19910124 <
JP 061338	00 A	19940517	JP 1991-7996	19910125
PRAI GB 1990-1	.764 A	19900125		
GB 1990-2	5283 A	19901121		

AB A method for amplification of target nucleic acids for diagnosis or detn.of disease potential, to identify drug resistance sequences, and to detect nucleotide sequence variations in general, is described. The target nucleic acid contains an unknown sequence, a priming region ofknown nucleotide sequence for hybridization with a primer, and a vectorette portion, at least one strand of which has a sequence which in its singleor double-stranded form is capable of blocking hybridization, e.g by being bound by a protein such as a restriction enzyme or a DNA or RNA polymerase. Vectorettes may have a terminal polymerization blocking moiety on one strand with the other strand containing the sequence forming the protein-binding sequence or they may contain a region of noncomplementarity that forms protein-binding sequences for 2 different proteins. The use of the vectorette allows the amplification of a sequence in genomic DNA with limited information about the sequence of interest; a sequence long enough to act as one of the primers is all that is needed. The second primer lies within the vectorette and no extension product is produced if their is no 1st priming region. The method was used to amplify protein and 23S rRNA genes of Chlamydia trachomatis.

PI EP 439330 A2 19910731

	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
ΡI	EP 439330	A2 19910731	EP 1991-300479	19910122 <
	EP 439330 ·	A3 19920219		
	R: AT, BE, CH,	DE, DK, ES, FR, G	B, GR, IT, LI, LU,	NL, SE
	AU 9169384	A 19910801	AU 1991-69384	19910116 <
	AU 652548	B2 19940901	•	
	GB 2240339	A 19910731	GB 1991-1373	19910122 <
	GB 2240339	B 19940216		
	CA 2034883	A1 19910726	CA 1991-2034883	19910124 <
	JP 06133800	A 19940517	JP 1991-7996	19910125
IT	136509-47-2 13650	9-48-3 136509-87	-0 136509-88-1	136509-89-2
	136509-90-5			

RL: BIOL (Biological study)

(primers for polymerase chain reaction amplification of target vectorette-containing nucleic acids)

- L5 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1992:35362 CAPLUS
- DN 116:35362
- TI ApoB gene nonsense and splicing mutations in a compound heterozygote for familial hypobetalipoproteinemia
- AU Huang, Li Shin; Kayden, Herbert; Sokol, Ronald J.; Breslow, Jan L.
- CS Lab. Biochem. Genet. Metab., Rockefeller Univ., New York, NY, 10021, USA
- SO Journal of Lipid Research (1991), 32(8), 1341-8
  - CODEN: JLPRAW; ISSN: 0022-2275
- DT Journal
- LA English
- AB Two novel apoB gene mutations were identified in a patient (CM) with phenotypic homozygous hypobetalipoproteinemia. Haplotype anal. of the apoB alleles from this patient and his family members revealed him to be a genetic compound for the disease. In contrast to previous studies of other hypobetalipoproteinemic patients, no clues existed as to where in the apoB gene the mol. defects resided. Therefore, it was necessary to characterize the apoB genes of the patient by sequence anal. The apoB gene contains 29 exons and is 43 kb in length. The gene encodes a 14.1 kb mRNA and a 4563 amino acid protein. Both apoB alleles from the patient were cloned via 26 sets of polymerase chain reactions (PCR). These clones contained a total of .apprx.24 kb of apoB gene sequence, including regions

5' and 3' to the coding region, 29 exons, and the intron/exon junctions. Complete DNA sequence anal. of these clones showed that each apoB allele had a mutation. In the paternal apoB allele, there was a splicing mutation. The first base of the dinucleotide consensus sequence (GT) in the 5' splice donor site in intron 5 was replaced by a T. It is likely that this base substitution interferes with proper splicing and results in the observed absence of plasma apoB. In the maternal apoB allele, there was a nonsense mutation. The first base of the Arg codon (CGA) at residue 412 in exon 10 was replaced by a T, resulting in a termination codon (TGA). The nonsense mutation is likely to terminate translocation after residue 411 resulting in a severely truncated protein only 9% of the length of B-100. The inheritance of these defective apoB alleles cosegregated with low total cholesterol levels observed in family members. One of the siblings, MM, who also presented with phenotypic homozygous hypobetalipoproteinemia, had both defective apoB alleles. Of the 2 other siblings, both of whom were phenotypical heterozygotes for the disease, one (GM) had the allele with the splicing mutation and the other (JM) had the allele with the nonsense mutation. In summary, a strategy is presented for identifying apoB gene mutations by PCR cloning and sequencing. This is useful for anal. of defects in patients where there is no clue as to the location of the mutation. The technique has resulted in the identification of 2 novel apoB gene mutations.

SO Journal of Lipid Research (1991), 32(8), 1341-8

CODEN: JLPRAW; ISSN: 0022-2275

IT 137924-65-3P 137924-75-5P

RL: PREP (Preparation)

(preparation of polymerase chain reaction probe, for identification of polymorphism in apolipoprotein B gene of human)

- L5 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1991:20613 CAPLUS
- DN 114:20613
- TI Hybridization method, primers, and probes for detecting bacteria and eukaryotes, especially in food products
- IN Allaer, Didier Georges Jean Marie; Rossius, Michel Thierry Jean Francois; Renard, Andre Jean Joseph
- PA Societe Europeenne de Biotechnologie, Belg.
- SO Fr. Demande, 16 pp. CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	FR 2636075	A1	19900309	FR 1988-11693	19880907 <
	FR 2636075	B1	19911115		
PRAI	FR 1988-11693		19880907		

AB Bacteria and eukaryotes (especially yeast, fungi, and parasites) are detected (especially in food products) by extracting rRNA, transcribing the rRNA into DNA with

reverse transcriptase, preparing cDNA in the presence of primer(s), and amplifying and detecting the DNA. The rRNA is particularly 16S rRNA or the corresponding rRNA in eukaryotes. Primers and probes from Escherichia coli 16S rRNA are described.

PI FR 2636075 A1 19900309

F -	IN 2000015 AI	100000			
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	FR 2636075	A1	19900309	FR 1988-11693	19880907 <
	FR 2636075	B1	19911115		
IT	130938-14-6	130958-35-9	130958-38-2	130958-40-6 13095	8-42-8
	130958-43-9	131092-62-1	131092-64-3		

RL: ANST (Analytical study) (primer or probe of, of Escherichia coli 16S rRNA, for bacteria and eukaryote detection)

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ANSWER 17 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1991:179630 CAPLUS
AN
DN
     114:179630
     Cytoplasmic and periplasmic expression of a synthetic gene for ferredoxin
TI
     in Escherichia coli
     Bourdineaud, J. P.; Howard, S. P.; Pages, J. M.; Bernadac, A.; Leroy, G.;
AII
     Bruschi, M.; Lazdunski, C.
     Cent. Biochim. Biol. Mol., Marseille, 13402, Fr.
CS
     Biochimie (1990), 72(6-7), 407-15
SO
     CODEN: BICMBE; ISSN: 0300-9084
DТ
     Journal
LΑ
     English
AB
     A synthetic gene coding for a modified ferredoxin II of Desulfovibrio
     desulfuricans Norway strain was assembled from 10 olgionucleotides. This
     gene was cloned into various expression vectors allowing either
     cytoplasmic expression or export to the periplasmic space. In the latter
     case, 2 different constructs were made, each of which contained the OmpA
     signal peptide: one of these constructs contained 3 addnl. N-terminal
     amino acids as compared to the wild-type ferredoxin (56 amino acid
     residues). The expression of proteins encoded by the 3 constructs was
     assayed in E. coli and the proteins were localized by cell fractionation
     and immunogold labeling. A low percentage of the periplasmic ferredoxin
     (≈5%) was secreted to the medium in the absence of cell lysis.
     The recombinant ferredoxin was purified and found to be correctly
     processed by the leader peptidase. However, due to the high cysteine
     content intramol. and intermol. disulfide bonds were formed and prevented
     binding of [4Fe-4S] clusters.
     Biochimie (1990), 72(6-7), 407-15
SO
     CODEN: BICMBE; ISSN: 0300-9084
IT
     133335-33-8: 133335-37-2 133335-38-3 133335-39-4
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                  133335-43-0 133335-44-1 133335-50-9
     133335-42-9
     133335-52-1
     RL: PROC (Process)
        (synthesis and ligation of, for assembly of synthetic gene for modified
        apoferredoxin II of Desulfovibrio desulfuricans)
     ANSWER 18 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
AN
     1990:113598 CAPLUS
DN
     112:113598
     Synthetic gene coding cystatin \alpha and its use for manufacturing the
TI
     same
     Ike, Yoshimasa; Katsunuma, Nobuhiko
IN
     Mitsui Toatsu Chemicals, Inc., Japan
PΑ
     Jpn. Kokai Tokkyo Koho, 7 pp.
     CODEN: JKXXAF
DT
     Patent
TιA
     Japanese
FAN.CNT 1
                        KIND
                                DATE
                                           APPLICATION NO.
                                                                   DATE
     PATENT NO.
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                         _ - - -
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                         Α
     JP 64002582
                                19890106
                                           JP 1987-290697
                                                                   19871119 <--
PRAI JP 1987-21706 A1
                                19870203
     Gene encoding cystatin \alpha(I) is synthesized, cloned, and expressed in
     recombinant Escherichia coli. D. Plasmid pTP1-E010 containing I gene was transformed into E. coli MC 1061. The E. coli transformants were cultured
     overnight at 37°in 5 mL L broth containing yeast extract, trypton, and
     salt to produce 200-250 ng I/mL/A 600 nm determined by EIA method or 180-230 ng
     I/mL/A 600 nm determined by papain inhibition method.
PΙ
     JP 64002582 A 19890106 Showa
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                         _ _ _ _
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                        Α
                                19890106 JP 1987-290697
     JP 64002582
PΙ
                                                                   19871119 <--
     118899-71-1 118899-84-6 118899-94-8 118899-95-9 118899-97-1
IT
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118899-99-3
                               118900-00-8 118900-02-0
    118899-98-2
                 118900-04-2
                               118900-05-3
                                            118900-06-4
    118900-03-1
                 118900-08-6
                               118900-09-7
                                            118900-10-0
                                                         118900-12-2
    118900-07-5
    118900-14-4
    RL: PRP (Properties)
       (synthetic DNA fragment of cystatin \alpha gene)
    ANSWER 19 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
AN
    1990:510491 CAPLUS
DN
    113:110491
    Ruthenium-containing DNA and RNA for use in nucleic acid sequencing and
ΤI
    hydridization
    Bannwarth, Wilhelm; Knorr, Reinhard; Mueller, Francis; Schmidt, Dieter
IN
    Hoffmann-La Roche, F., und Co. A.-G., Switz.
PA
    Eur. Pat. Appl., 16 pp.
SO
    CODEN: EPXXDW
DT
    Patent
    German
LA
FAN.CNT 1
                       KIND DATE
    PATENT NO.
                                       APPLICATION NO. DATE
                                        . -----
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                             _____
                                                               -----
                              19891108 EP 1989-107439
                                                               19890425 <--
PΤ
    EP 340605
                       A2
A3
                        A2
                             19910508
    EP 340605
        R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE
    AU 8933343 A 19891109
                                       AU 1989-33343
                                                               19890424 <--
                       B2
                              19920430
    AU 622899
    JP 02011597
                       Α
                              19900116
                                       JP 1989-107096
                                                               19890426 <--
                       Α
PRAI CH 1988-1662
                              19880504
    CH 1988-3171
                       Α
                              19880826
    DNA or RNA covalently bound to a Ru complex is prepared These derivs. may
AB
    be used in nucleic acid hybridization analyses and in sequencing. An
    activated Ru complex was prepared by reaction of
    Ru[batho]2[batho(CH2)5CO2H]Cl2 with 1,1,3,3-tetramethyl-2-
    succinimdyluronium tetrafluoroborate. A 5'-amino-oligodeoxyribonucleotide
    (a 25-mer) was reacted with the activated complex to prepare a Ru-labeled
    primer which was used in DNA sequencing by the Sanger method.
PΙ
    EP 340605 A2 19891108
    PATENT NO.
                      KIND
                              DATE
                                         APPLICATION NO.
                                                               DATE
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                                                               _____
    EP 340605 A2
EP 340605 A3
PΙ
                              19891108
                                        EP 1989-107439
                                                               19890425 <--
                           19910508
        R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE
    AU 8933343 A 19891109
                                       AU 1989-33343
                                                               19890424 <--
    AU 622899
                        B2
                              19920430
                        Α
    JP 02011597
                              19900116
                                        JP 1989-107096
                                                               19890426 <--
    7440-18-8DP, Ruthenium, complexes, nucleic acid conjugates
IT
                                                              119572-76-8P
    119572-77-9P
                 119572-78-0P 119572-79-1P 119572-80-4P
    119572-81-5P
                  119592-95-9P
    RL: PREP (Preparation)
        (preparation of, for nucleic acid hybridization and sequencing)
                119509-34-1 119509-35-2 119509-37-4
IT
    119509-29-4
    RL: RCT (Reactant); RACT (Reactant or reagent)
       (reaction of, with activated ruthenium complex)
    ANSWER 20 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
    1990:135577 CAPLUS
AN
DN
    112:135577
ΤI
    Method and device for improved restriction fragment length polymorphism
IN
    Helentjaris, Timothy George; Lee, Mark S.; Shattuck-Eidens, Donna Marie
PA
    Native Plants, Inc., USA
    Eur. Pat. Appl., 27 pp.
SO
    CODEN: EPXXDW
DT
    Patent
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English
T.A
FAN.CNT 1
                        KIND
                               DATE
                                           APPLICATION NO.
                                                                  DATE
    PATENT NO.
     ______
                         _ _ _ _
                               _____
                                            ______
                                                                   . _ _ _ _ _ _ _
                         A2
                               19890524
                                           EP 1988-310729
                                                                  19881114 <--
PΙ
    EP 317239
    EP 317239
                         Α3
                               19900117
        R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
                                           JP 1988-287487
                                                                  19881114 <--
                         Α
                               19900108
    JP 02002400
    JP 2634208
                         B2
                               19970723
    CA 1323553
                                           CA 1988-583057
                         С
                               19931026
                                                                  19881114 <--
    US 5324631
                         Α
                               19940628
                                           US 1991-752907
                                                                  19910826
PRAI US 1987-120309
                         Α
                               19871113
    US 1988-266970
                         Α
                               19881103
    A method for rapid restriction fragment length polymorphism (RFLP) anal.
AB
    comprises (a) hybridizing a restricted target DNA sample and fluorescent
    mol.-labeled oligodeoxyribonucleotide(s) which is complementary to a
    portion of the RFLP in the presence of an oligodeoxyribonucleotide
     elongating enzyme; (b) separating the hybridization mixture by PAGE; and (c)
     exciting and detecting any fluorescing mols in the gel. Variations in
    nucleic acid sequence between ≥2 nucleic acid test samples are
     detected by an enhancement step using a polymerase chain reaction (PCR)
     technique and detecting the enhancement products of the hybridization
     mixture An apparatus for detecting the fluorescing mols. in the gel in also
     disclosed. Maize loci 288 and 451 of different maize cultivars were
     analyzed using 2 sets of primers and PCR amplification between the primers
     with Taq polymerase. The amplified DNA was sequenced using a Sequenase
     kit (U.S. Biochem. Corp.); the sequences are presented.
     EP 317239 A2 19890524
```

E.T	EF 31/237 RZ 17070324							
	PATENT NO.	KIND DATE	APPLICATION NO.	DATE				
		<b></b>						
ΡI	EP 317239	A2 1989052	24 EP 1988-310729	19881114 <				
	EP 317239	A3 1990011	L <b>7</b>					
	R: AT, BE, CH,	DE, ES, FR, GE	B, GR, IT, LI, LU, NL, SE					
	JP 02002400	A 1990010	)8 JP 1988-287487	19881114 <				
	JP 2634208	B2 1997072	23					
	CA 1323553	C 1993102	26 CA 1988-583057	19881114 <				
	US 5324631	A 1994062	28 US 1991-752907	19910826				
IT	125855-48-3 125855-	54-1 125855-5	59-6 125855-76-7					
	125855-79-0 12590	1-83-9						

RL: ANST (Analytical study)

(as primer in restriction fragment length polymorphism anal., of different maize cultivars)

- L5 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1989:627755 CAPLUS
- DN 111:227755
- TI Unique substrate specificity and regulatory properties of PKC-ε: a rationale for diversity
- AU Schaap, Dick; Parker, Peter J.; Bristol, Andrew; Kriz, Ron; Knopf, John
- CS Ludwig Inst. Cancer Res., London, UK
- SO FEBS Letters (1989), 243(2), 351-7 CODEN: FEBLAL; ISSN: 0014-5793
- DT Journal
- LA English
- AB Protein kinase C (PKC)-ε was isolated from a murine brain cDNA library. The clone, λ61PKC-ε, encoded a polypeptide of 737 amino acids that is homologous to other PKCs. Northern anal. showed that the 7 kb mRNA for this cDNA is widely expressed. The protein, when expressed in COS-1 cells, displayed phorbol ester-binding activity. However in order to detect the kinase activity of PKC-ε, it was necessary to employ a synthetic peptide substrate based upon the pseudosubstrate site. Subsequent anal. demonstrated that PKC-ε, while showing certain properties characteristic of the PKC family, has a quite distinct substrate specificity and is independent of Ca2+.

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FEBS Letters (1989), 243(2), 351-7
SO
     CODEN: FEBLAL; ISSN: 0014-5793
IT
     120298-88-6P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and cDNA library screening for protein kinase C-&
        sequences using)
     ANSWER 22 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1990:1993 CAPLUS
AN
DN
     112:1993
     Bathophenanthroline-ruthenium(II) complexes as nonradioactive labels for
тT
     dideoxy DNA sequencing
     Bannwarth, Willi
ΑU
     Cent. Res. Units, F. Hoffmann-La Roche Ltd., Basel, CH-4002, Switz.
CS
     Analytical Biochemistry (1989), 181(2), 216-19
SO
     CODEN: ANBCA2; ISSN: 0003-2697
     Journal
DT
     English
LΑ
     Bathophenanthroline-Ru(II) complexes represent interesting nonradioactive
AB
     label mols. which can be measured in a time-resolved mode with high
     sensitivity. This report demonstrates that Ru complex-labeled primers can
     be applied in dideoxy sequencing protocols giving the same sequencing
     patterns as unlabeled primers.
     Analytical Biochemistry (1989), 181(2), 216-19
SO
     CODEN: ANBCA2; ISSN: 0003-2697
     119509-37-4P
                    123996-97-4P 124024-70-0P
TT
     RL: PREP (Preparation)
        (preparation of, as universal primer for M13 dideoxy DNA sequencing)
     ANSWER 23 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
AN ·
     1990:49710 CAPLUS
DN
     112:49710
     Regulation of fos gene: a paradigm for nuclear oncogenes
ΤI
     Verma, I. M.; Visvader, J.; Lamph, W. W.; DeTogni, P.; Barber, J.;
ΑU
     Sassone-Corsi, P.
CS
     Salk Inst., San Diego, CA, 92138, USA
     UCLA Symposia on Molecular and Cellular Biology, New Series (1989
SO
     ), 87 (Gene Transfer Gene Ther.), 129-49
     CODEN: USMBD6; ISSN: 0735-9543
DT
     Journal
     English
LΑ
     Proto-oncogene fos is an inducible gene. Expression is invariably very
AΒ
     rapid but transient. A cAMP responsive element (CRE) has been identified
     to be localized between positions -57 to -63 upstream of the 5'-cap site.
     In DNaseI footprint anal., purified CRE binding protein protects this
             The c-fos cDNA is able to induce transformation if an A-T rich
     stretch located downstream of the coding domain is removed. Both the
     viral and cellular fos protein are extensively modified with serine
     phosphorylation as the predominant modification. Fos monoclonal
     antibodies have been generated. Regulation of the fos gene is complex,
     but appears to involve controls at the level of transcription,
     post-transcription and post-translation.
     UCLA Symposia on Molecular and Cellular Biology, New Series (1989
SO
     ), 87 (Gene Transfer Gene Ther.), 129-49
     CODEN: USMBD6; ISSN: 0735-9543
     124539-96-4
TΤ
     RL: PROC (Process)
        (of gene c-fos promoter, of human, structure and regulation of)
     ANSWER 24 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
1.5
AN
     1990:492125 CAPLUS
DN
     113:92125
     Nucleotide sequences of the Erwinia chrysanthemi ogl and pelE genes
```

negatively regulated by the kdgR gene product

- AU Reverchon, Sylvie; Huang, Yue; Bourson, Claude; Robert-Baudouy, Janine
- CS Lab. Genet. Mol. Microorg., Inst. Natl. Sci. Appl., Villeurbanne, 69621, Fr.
- SO Gene (1989), 85(1), 125-34 CODEN: GENED6; ISSN: 0378-1119
- DT Journal
- LA English
- The nucleotide sequences of the coding and regulatory regions of the genes AB encoding oligogalacturonate lyase (OGL) and pectate lyase isoenzyme (PLe) from E. chrysanthemi 3937 were determined The ogl sequence contains an open reading frame (ORF) of 1164 bp coding for a 388-amino acid (aa) polypeptide with a predicted Mr of 44,124. A possible transcriptional start signal showing homol. With the Escherichia coli promoter consensus sequence was detected. In addition, a sequence 3' to the coding region was found to be able to form a secondary structure which may function as an Rho-independent transcriptional termination signal. For the pelE sequence, a long ORF of 1212 bp coding for a 404-aa polypeptide was detected. PLe is secreted into the external medium by E. chrysanthemi, and a potential signal peptide sequence was identified in the pelE gene. In the 5' upstream pelE coding region, a putative promoter resembling E. coli promoter consensus sequences was detected. Furthermore, the region immediately 3' to the pelE translational stop codon may function as an Rho-independent translational termination signal. In strain 3937, the synthesis of OGL and PLe, as well as the other enzymes involved in the pectin-degradative pathway (particularly the kdgT product), are known to be regulated by the KdgR repressor, which mediates galacturonate and polygalacturonate induction. Synthesis of these enzymes is also regulated by the CRP-cAMP complex which mediates catabolite repression. Anal. of the regulatory regions of ogl and pelE allowed to identify possible CRP-binding sites for these 2 genes. Furthermore, comparative study of the regulatory regions of the ogl, kdgT and pelE genes revealed the existence of a highly conserved sequence which could correspond to a whole or partial KdgR-binding site.
- SO Gene (1989), 85(1), 125-34 CODEN: GENED6; ISSN: 0378-1119
- IT 128513-23-5 128513-24-6 128513-25-7 128513-26-8 128513-38-2 128513-39-3 128907-65-3, Deoxyribonucleic acid (Erwinia chrysanthemi clone pOGL10 gene ogl) 128907-66-4, Deoxyribonucleic acid (Erwinia chrysanthemi clone pPLeD1 gene pelE)
  RL: PRP (Properties); BIOL (Biological study) (nucleotide sequence of)
- L5 ANSWER 25 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
- AN 1989:188622 CAPLUS
- DN 110:188622
- TI Bathophenanthroline-ruthenium(II) complexes as non-radioactive labels for oligonucleotides which can be measured by time-resolved fluorescence techniques
- AU Bannwarth, Willi; Schmidt, Dieter; Stallard, Robert L.; Hornung, Claudia; Knorr, Reinhard; Mueller, Francis
- CS Cent. Res. Units, F. Hoffmann-La Roche and Co. Ltd., Basel, CH-4002, Switz.
- SO Helvetica Chimica Acta (1988), 71(8), 2085-99 CODEN: HCACAV; ISSN: 0018-019X
- DT Journal
- LA English
- AB The specific attachment of bathophenanthroline-ruthenium(II) complexes as nonradioactive label mols. to synthetically 5'-NH2-modified oligonucleotides is described. After excitation by light pulses, the fluorescence of these labels can be measured by a time-resolved mode with high sensitivity. No quenching takes place due to coupling of the Ru complexes to the DNA. Ru-complex-labeled oligonucleotides still hybridize specifically to cDNA sequences, and no quenching is observed in the course of the hybridization process.

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Helvetica Chimica Acta (1988), 71(8), 2085-99
SO
     CODEN: HCACAV; ISSN: 0018-019X
     119509-29-4P
                    119509-34-1P
                                   119509-35-2P
                                                  119509-36-3P
IT
     119509-37-4P
     RL: PREP (Preparation)
        (preparation of and reaction with bathophenanthroline-ruthenium complexes)
                    119572-77-9P
                                   119572-78-0P
                                                   119572-79-1P
IT
     119572-76-8P
     119572-80-4P
                                   119572-82-6P
                    119572-81-5P
                                                   119592-95-9P
     RL: PREP (Preparation)
        (preparation of, as label for nucleic acid hybridization assay with
        time-resolved fluorescence detection)
     ANSWER 26 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1989:434408 CAPLUS
ΔN
DN
     111:34408
     Total synthesis of the cystatin \alpha gene and its expression in E. coli
ΤI
     Katunuma, Nobuhiko; Yamato, Masayuki; Kominami, Eiki; Ike, Yoshimasa
ΑU
     Inst. Enzyme Res., Univ. Tokushima, Tokushima, 770, Japan
CS
     FEBS Letters (1988), 238(1), 116-18
SO
     CODEN: FEBLAL; ISSN: 0014-5793
DT
     Journal
LΑ
     English
     A gene encoding cystatin \alpha was chemical synthesized, cloned, and
AB
     expressed in E. coli. The gene of 318 base pairs was assembled by enzymic
     ligation of 19 oligonucleotides and cloned into a pBR322-derived
     expression plasmid downstream of the tac promoter. The expression product
     of the synthetic gene was purified by Sephadex G-50 column chromatog. and
     shown to have the same properties as those of the authentic protein
     isolated from rat epidermis.
     FEBS Letters (1988), 238(1), 116-18
SO
     CODEN: FEBLAL; ISSN: 0014-5793
                                 118899-94-8
                                                118899-95-9
                                                              118899-97-1
IT
     118899-71-1
                   118899-84-6
                                 118900-00-8 118900-02-0
     118899-98-2
                   118899-99-3
                   118900-04-2
                                 118900-05-3
                                                118900-06-4
     118900-03-1
                   118900-08-6
                                 118900-09-7
                                                118900-10-0
                                                              118900-12-2
     118900-07-5
     118900-14-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (oligonucleotide coupling reaction of)
     ANSWER 27 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
     1988:493524 CAPLUS
AN
DN
     109:93524
     An automated DNA synthesizer employing deoxynucleoside 3'-phosphoramidites
TΙ
     Horvath, Suzanna J.; Firca, Joseph R.; Hunkapiller, Tim; Hunkapiller,
ΑU
     Michael W.; Hood, Leroy
     Div. Biol., California Inst. Technol., Pasadena, CA, 91125, USA
CS
SO
     Methods in Enzymology (1987), 154 (Recomb. DNA, Pt. E), 314-26
     CODEN: MENZAU; ISSN: 0076-6879
DT
     Journal
LA
     English
AΒ
     An automated synthesizer which employs activated deoxynucleoside
     3'-phosphoramidites in the solid-phase synthesis of oligodeoxynucleotides
     is presented. The design of the apparatus, as well as reagents, conditions,
     and reaction steps are discussed.
     Methods in Enzymology (1987), 154 (Recomb. DNA, Pt. E), 314-26
     CODEN: MENZAU; ISSN: 0076-6879
     78169-78-5P
                   115832-20-7P
                                                  115832-22-9P
                                                                 115832-23-0P
                                  115832-21-8P
     115832-24-1P
                    115832-25-2P
                                   115832-26-3P 115832-27-4P
                    115832-29-6P
                                   115832-30-9P
                                                   115832-31-0P
                                                                  115832-32-1P
     115832-28-5P
                    115832-37-6P
                                   115832-43-4P
                                                   115832-45-6P
                                                                  115832-48-9P
     115832-33-2P
                                   115832-60-5P
     115832-49-0P
                    115832-50-3P
                                                   115832-63-8P
                                                                  115832-65-0P
                    115832-67-2P
                                   115832-68-3P
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     115832-66-1P
     115832-71-8P
                    115832-83-2P
                                   115832-84-3P
                                                   115832-85-4P
                                                                  115832-92-3P
     115832-93-4P
                    115832-94-5P
                                   115832-95-6P
                                                   115865-63-9P
                                                                  115973-60-9P
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115973-61-0P 115973-62-1P 115973-63-2P 115973-64-3P RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, automated synthesizer method for)

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L5 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
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AN 1986:16087 CAPLUS

DN 104:16087

TI Gene technology method for producing human  $\gamma$ -interferon and an agent for performing this method

IN Engels, Joachim; Leineweber, Michael; Uhlmann, Eugen; Ulmer, Wolfgang

PA Hoechst A.-G., Fed. Rep. Ger.

SO Ger. Offen., 26 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

		_					
	PAT	TENT NO.		KIND	DATE	APPLICATION NO.	DATE
				<del>-</del>			
ΡI	DE	3409966		A1	19850926	DE. 1984-3409966	19840319 <
	ΕP	155590		A2	19850925	EP 1985-102499	19850306 <
	ΕP	155590		<b>A</b> 3	19870422		
		R: AT, BE,	CH,	DE, I	FR, GB, IT,	LI, LU, NL, SE	
	HU	37651		<b>A2</b>	19860123	HU 1985-932	19850313 <
	FI	8501037		Α	19850920	FI 1985-1037	19850315 <
	DK	8501219		Α	19850920	DK 1985-1219	19850318 <
	NO	8501065		Α	19850920	NO 1985-1065	19850318 <
	ΑU	8540047		Α	19850926	AU 1985-40047	19850318 <
	ΑU	576226		B2	19880818		
	JР	60210996		Α	19851023	JP 1985-52577	19850318 <
	ES	541350		A1	19851216	ES 1985-541350	19850318 <
	ZA	8501992		Α	19860827	ZA 1985-1992	19850318 <
PRAI	DÉ	1984-3409966		Α	19840319		

AB A synthetic gene is used in the production of human  $\gamma$ -interferon. The gene is prepared in the form of fragments containing 18-33 nucleotides which are

ligated enzymically with phage T4 DNA ligase to produce 3 partial sequences. These are incorporated into hybrid plasmids, amplified in Escherichia coli K12, reisolated, and coupled enzymically to form the complete gene which is incorporated into plasmid pKK177.3 or pMX2 for expression in E. coli.

PI DE 3409966 A1 19850926

PI	PATENT NO.		DATE API	PLICATION NO.	DATE
PI		A1 A2 A3		1984-3409966 1985-102499	
	R: AT, B	E, CH, DE, FR	, GB, IT, LI, LI		19850313 <
		A2 A	19860123 HU 19850920 FI	1985-1037	19850315 <
	DK 8501219 NO 8501065	A A		1985-1219 1985-1065	
	AU 8540047 AU 576226	A B2	19850926 AU 19880818	1985-40047	19850318 <
	JP 60210996 ES 541350	A A1	19851023 JP	1985-52577 1985-541350	
	ZA 8501992	Α	19860827 ZA	1985-1992	19850318 <
ΙΤ	99402-33-2P 99402-41-2P		99402-37-6P 99402-43-4P	99402-39-8P 99402-44-5P	99402-40-1P 99402-45-6P
	99402-46-7P 99402-51-4P	99402-47-8P 99402-52-5P	99402-48-9P 99402-53-6P	99402-49-0P 99402-54-7P	99402-50-3P 99402-55-8P
	99402-56-9P 99402-61-6P	99402-57-0P 99402-62-7P	99402-58-1P 99402-63-8P	99402-59-2P 99402-64-9P	•
	99402-67-2P RL: PREP (Pre	99402-68-3P	99402-69-4P	99402-70-7P	2222 22 22
	TO. INDE (FIC	Paracron,			

(preparation of, in human  $\gamma$ -interferon gene synthesis)

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ANSWER 29 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
AN
     1984:630936 CAPLUS
DN
     101:230936
     Improved synthesis of oligodeoxyribonucleotides by solid-phase
ΤI
     phosphotriester method utilizing O6-[2-(p-nitrophenyl)ethyl]-2'-
     deoxyguanosine derivatives
     Chollet, Andre; Ayala, Edgar; Kawashima, Eric H.
AU
CS
     Dep. Chem., Biogen S. A., Geneva, CH-1211, Switz.
     Helvetica Chimica Acta (1984), 67(5), 1356-64
SO
     CODEN: HCACAV; ISSN: 0018-019X
рΤ
     Journal
     English
LΑ
     The synthesis of oligodeoxyribonucleotides was carried on a cross-linked
AB
     polystyrene solid support utilizing stable mono- and dinucleotide
     phosphotriester building blocks. The use of O6-[2-(p-nitrophenyl)ethyl]-
     2'-deoxyguanosine derivs. gave cleaner DNA fragments by suppressing side
     reactions. Oligodeoxyribonucleotides ranging from 6-41 bases in length
     were prepared Modifications improving the phosphotriester method are
     presented. The purification methods and anal. of synthetic
     oligodeoxyribonucleotides are described.
SO
     Helvetica Chimica Acta (1984), 67(5), 1356-64
     CODEN: HCACAV; ISSN: 0018-019X
IT
     93130-35-9P 93229-31-3P
                               93229-35-7P
                                             93229-39-1P
     93229-43-7P
                   93229-47-1P
                                 93357-06-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (solid-phase phosphotriester preparation of, [(nitrophenyl)ethyl]deoxyguanos
        ine derivative as reactant in)
     ANSWER 30 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN
L5
AN
     1982:486242 CAPLUS
DN
     97:86242
     Rat kappa-chain J-segment genes: two recent gene duplications separate
ΤI
     rat and mouse
ΑU
     Sheppard, Haynes W.; Gutman, George A.
CS
     Coll. Med., Univ. California, Irvine, CA, 92717, USA
     Cell (Cambridge, MA, United States) (1982), 29(1), 121-7
SO
     CODEN: CELLB5; ISSN: 0092-8674
DT
     Journal
     English
LA
AB
     DNA segments containing the Jk genes from LOUVAIN rat liver were cloned
     and their nucleotide sequence determined Seven readily identifiable
     J\kappa-coding regions (6 expressible) are evident in the rat, compared
     with 5 in the mouse (4 expressible). The 2 addnl. J segments in the rat
     appear to be the result of 2 sequential gene duplications occurring since
     the divergence of rats and mice. The 1st involved a homologous but
     unequal crossing-over in a 14-base pair (bp) region spanning the 3' end of
     the coding region of J1 and J2. The 2nd involved a crossing-over
     following unequal pairing of the 2 newly duplicated regions. Perhaps the
     probability of a 2nd duplication was greatly increased following the 1st
     as a result of the increased target for unequal pairing (370 bp of good
     homol. vs. 27 bp in the original pairing). Comparisons of rat and mouse J
     genes show a surprisingly high degree of sequence conservation, both
     inside and outside the coding regions, similar to the pattern reported
     previously for the kappa constant-region gene. This provides addnl.
     evidence that constraints exist on the nucleotide sequences of these genes
     independent of the function of the encoded proteins.
SO
     Cell (Cambridge, MA, United States) (1982), 29(1), 121-7
     CODEN: CELLB5; ISSN: 0092-8674
IT
     82785-01-1
                  82785-02-2
                               82785-03-3 82785-04-4
                                                       82785-05-5
     82785-06-6
                  82785-07-7
     RL: PRP (Properties); BIOL (Biological study)
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(nucleotide sequence of)

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3+10.sup.9 D1210 cells by electroporation. The transformed cells.
            . was phenolchloroform extracted and ethanol precipitated in the
DETD
       presence of 10 ug of yeast tRNA, pelleted, washed, and dried. The
       nucleic acid pellet was dissolved in 5 ul of water and
       used to transform 3+10.sup.9 [2+10.sup.9 on second
       execution] D1210 cells by.
DETD
                        . . pEP1304 with rav.
pEP1400 to
          pEP1200 series plasmids with HIV 353-369
          substituted for Right Symmetrized Targets.
pEP1499
pEP1500 to
          pEP1400 series plasmids containing
          modified rav.sub.R genes producing Rav.sub.r proteins
pEP1599
          that complement the rav.sub.L.sup. - VF55 mutation.
pEP1600 to
          pEP1400 series plasmids containing
          modified rav.sub.R genes producing Rav.sub.R proteins
pEP1699
          that complement the rav.sub.L.sup.- FW58 mutation.
pEP2000
          pEP1009 with rav replaced by arc.
pEP2001
          pEP2000 with arc.
DETD
             . of DNA binding sites by regulatory proteins: the LexA protein
       and the arginine repressor use different strategies for functional
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       16:5089-5105.
DETD
       HIPP89: Hippel, P H von, and O G Berg, "DNA-Protein Interactions in the
       Regulation of Gene Expression", pp.1-18 in Protein-Nucleic
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DETD
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DETD
       EcoR124 and EcoR124/3 type I DNA restriction and modification
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DETD
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DETD
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DETD
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       Protein", pp.234-263, In: Biological Macromolecules and Assemblies:
       Volume 2-Nucleic Acids and Interactive Proteins.,
       John Wiley and Sons, Inc., 1985.
=> d his
     (FILE 'HOME' ENTERED AT 16:33:52 ON 13 MAR 2007)
     FILE 'REGISTRY' ENTERED AT 16:34:58 ON 13 MAR 2007
           4785 S TGACGTT/SQSN AND SQL<=40
L1
     FILE 'CAPLUS, USPATFULL' ENTERED AT 16:39:23 ON 13 MAR 2007
L2
           2070 S L1
L3
           1481 S L2 AND AY>1994
L4
             30 S L2 AND PY<1994
             30 DUP REM L4 (0 DUPLICATES REMOVED)
L5
L6
          98885 S ANTISENSE
L7
              0 S NUCLEIC ADJ ACID
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314623 S NUCLEIC (W) ACID
T.R
        1112804 S NUCLEIC (W) ACID OR ODN OR OLIGONUCLEOTIDE OR DNA
L9
L10
        3875784 S STABILIZE OR STABILIZED OR MODIFIED OR MODIFICATION
L11
           5419 S UNMETHYLATED
L12
         799416 S CANCER OR TUMOR OR TUMOUR
L13
         695809 S BACTERIA OR BACTERIAL
L14
           1142 S L8 AND L10 AND L11 AND L12 AND L6
L15
              3 S L14 AND PY<1994
L16
              3 DUP REM L15 (0 DUPLICATES REMOVED)
=> s 19 and 110 and 111
          2595 L9 AND L10 AND L11
L17
=> s 117 and py<1994
L18
           104 L17 AND PY<1994
=> dup rem 118
PROCESSING COMPLETED FOR L18
            103 DUP REM L18 (1 DUPLICATE REMOVED)
L19
=> t 119 bib ab kwic 1-20
    ANSWER 1 OF 103 USPATFULL on STN
L19
AN
       1999:163444 USPATFULL
TI
       Introns and exons of the cystic fibrosis gene and mutations thereof
IN
       Tsui, Lap-Chee, Toronto, Canada
       Rommens, Johanna M., Willowdale, Canada
       Kerem, Bat-sheva, Jerusalem, Israel
PA
       HSC Research Development Corporation, Toronto, Canada (non-U.S.
       corporation)
       US 6001588
                               19991214
PΙ
       WO 9110734 19910725
                                                                      <--
       US 1992-890609
AΙ
                               19920713 (7)
       WO 1991-CA9
                               19910111
                                         PCT 371 date
                               19920713
                               19920713
                                         PCT 102(e) date
PRAI
       CA 1990-2007699
                           19900110
       CA 1990-2011253
                           19900301
       CA 1990-2020817
                           19900710
DT
       Utility
FS
       Granted
EXNAM
       Primary Examiner: Wax, Robert A.; Assistant Examiner: Lau, Kawai
LREP
       Bell Seltzer Intellectual Property Law Group of Alston & Bird LLP
CLMN
       Number of Claims: 9
ECL
       Exemplary Claim: 1
DRWN
       58 Drawing Figure(s); 45 Drawing Page(s)
LN.CNT 5304
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The identification, isolation and cloning of DNA sequences
       coding for mutant forms of the cystic fibrosis gene and their gene
      product are described. DNA sequence information and
       information relating to the genomic structure of the cystic fibrosis
       gene are provided. The mutant forms of the CF gene include specific
       sequence alterations in coding portions or of other genetic information
       at exon/intron boundaries and altered RNA transcripts and mutant protein
       products. Such DNA and protein information is useful in
       developing DNA or protein diagnosis for CF mutations, carrier
       and patient screening, as well as cloning of mutant genes and
       manufacturing of their proteins for investigation into therapies for
       cystic fibrosis.
PΙ
       US 6001588
                               19991214
       WO 9110734
                  19910725
AB
       The identification, isolation and cloning of DNA sequences
```

coding for mutant forms of the cystic fibrosis gene and their gene